

**The Economic Impact of and
Strategy for
Implementing an Ad-valorem Property Tax**

A Case Study of Krakow

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TABLE OF CONTENTS

Introduction	1
Background	2
Decentralization & Local Self-Sufficiency: A Financial Challenge for Municipalities	2
Revenue Generation in Poland: The Current Situation	2
The Property Tax as a Local Government Revenue Source for Krakow	3
Local Government Finance: A New Paradigm for the Property Tax	6
Disadvantages of the Current Land Area-Based System	7
Advantages of the Proposed Ad-Valorem Property Tax System	8
Further Transformation: Economic Impact And Equity Arguments	12
Equity Arguments	13
Impact on the City's Revenues	18
Cost of a New System	18
Strategy for Implementing an Ad-valorem Property Tax	19
Scenarios for Property Tax Reform	20
Issues	21
Bibliography	25

Annex: The Model and Modelling Process

Strategy
Data Collection
Attribute Data
Spatial Data
Spatial Overlays
Data Conditioning
Model Building Strategy
Data Filtering
Stepwise Regression - First Stage
Respecification of the Model
Economic Impact Analysis
Closing Comments on the Model

Maps

- A** Contours of Predicted Price to Actual Price
- B** Countours of Ratio of New Tax Bill to Old Tax Bill
- B-1** Response Surface Map of New Tax Bill to Old Tax Bill
- B-2** Thematic Map of Ratio of New Tax Bill to Old Tax Bill
- C** Rivers, Obrebs, Towns and Rails
- D** Value Zones

TABLE OF CONTENTS (Cont'd.)

Tables

- I** Structure of Gmina Revenues in 1992
- II** Comparisons of Property Tax Revenue in Selected Countries
- III** Tax Rate and Levy Scenarios
- IV.** Division of Institutional Responsibilities for Property Tax Administration in Poland

Annex Tables

- A** Lot Sheet
- B** Relationship of Area and Price: Multiple Regression Report
- C** NCSS Variable Lists with Definitions
- D** Summary of Regression Results
- E-1** Definitions of Variables
- E-2** Setup of Log
- F** Regression Model (Log-Log Model)
- G** Regression Model (Natural Model)

Graphs

- A** Ratio Vs. Value (Natural and Log Models)
- B** Effective Tax Rates Vs. Value (Area Model)
- C** New Bill Vs. Value Ad-Valorem
Model

ABSTRACT

Local governments in Poland are undergoing the process of fiscal decentralization and as a result face increasing responsibility, an uncertain future with regard to central government grants and subsidies, and the need to generate greater revenues so as to fulfill their new responsibilities. The property tax, which comprises roughly 17 percent of all revenues for local governments, offers the greatest potential for addressing this situation; that is, if it were converted from an area-based to an ad-valorem based system. Such a conversion could help improve the tax equity among the city's residents, increase revenues, serve as a more reliable revenue source, help to promote more efficient and productive use of land, and assist the city in improving its creditworthiness for long-term credit financing. All of these things would, in turn, help to increase local autonomy and self-reliance. Accordingly, ICMA and the Krakow Real Estate Institute (KREI), under funding from USAID, sought to demonstrate through a simulation the potential impact of implementing such a tax on the city of Krakow. The intention was to provide the city with the economic justification required to transition from an area-based to an ad-valorem based property tax. The findings suggest that the economic impact of introducing an ad-valorem property tax would be favorable, both in terms of equity to the residents and greater revenue for the city. It is hoped that these results will stimulate the debate and the political will to introduce this change in the local tax structure, either nationally through legislative amendments or locally through public referendum.

EXECUTIVE SUMMARY

Local governments in Poland face a challenge similar to those in other emerging market economies where the multiplicity of reforms -- that are necessary for the transition between economic systems and between centralized and decentralized forms of government -- do not occur simultaneously or automatically. This results in an incongruence between growing responsibilities for service and infrastructure provision, on the one hand, and the necessary resources or capacity to do so effectively, on the other. The limitations faced by local governments in Poland are: an over-reliance on central government transfers, revenue sharing and subsidies; small and limited autonomous sources of revenues; and lack of a market-based revenue systems. This situation limits local revenue generation potential and greatly hampers the ability of local governments to respond to growing local needs for services and infrastructure. These financial realities and constraints faced by local governments in Poland underscore the need to address national policies affecting local government finance as well as reform mechanisms such that they will improve municipal revenue generation at the local level.

Accordingly, this paper focuses on one aspect of the local revenue generation system that offers one of the most significant opportunities for improving municipal revenue generation capacity: the local property tax. and specifically on the advantages of converting it from a land area-based to an ad-valorem system. The reasons for focusing on the property tax is it is the most widely used form of raising revenue for local governments throughout the world; already exists as a local autonomous revenue source in Poland and is able to be reformed locally; has already proven itself to be the most important "self-controlled" fiscal source for all Polish local government; holds even more potential if converted to an ad-valorem system; offers a solution to the growing need for Polish local governments to identify greater and more reliable sources of revenue; and if reformed could assist local governments to improve their creditworthiness for long-term credit financing. The fact that the transition to a market economy is already underway makes it possible to analyze sales and other data for determine the advantages of converting to an ad-valorem system.

To support this new "paradigm" for reform of the property tax in Poland, this paper first presents the disadvantages in the current land area based approach to the property tax as well as the advantages in converting to an ad-valorem system. The disadvantages are that a land area based property tax system is regressive and unequal, a limited revenue source, and distorting of land markets. The advantages of converting to a market value based system, in contract, are that: the tax is almost impossible to avoid given that the tax base (property) is visible and -- at least with regard to land and buildings -- immovable; is a source of revenue that is not competitive with taxes used by higher levels of government; can distribute more equitably the tax burden and thereby improve social equity; can improve municipal revenue generation and the capacity for local self-government; can improve local ability to achieve credit rating and access to capital markets; can improve fiscal efficiency and transparency; can stimulate the use of underdeveloped land to its best use; and can stimulate more appropriate and intensive spatial development.

In addition to providing the rationale for converting to an ad-valorem system, it is important to base that rationale on empirical evidence. As a result, this paper also presents the results of a project undertaken during the Spring of 1994 by the International City/County Management Association (ICMA) in coordination with the Krakow Real Estate Institute (KREI) and under funding from the U.S. Agency for International Development (USAID) to test or simulate the impact of introducing an ad-valorem system in the city of Krakow. The significance of this simulation was to provide sufficient information to the city of Krakow on what the expected economic impact would be on the city in the event that such a tax were implemented. The intention is to provide the city with the economic justification required to transition from an area-based to an ad-valorem based property tax.

The findings suggest that the economic impact of introducing an ad-valorem property tax would be favorable, in terms of both equity to the residents and greater revenue for the city. With regard to equity arguments, several analysis were made. First, the results from analyzing the coefficient of dispersion (COD), which is the standard way of measuring the equity of the assessments by means of assessment-to-sales-price-ratio studies, suggest that the COD -- and equity -- does improve under an ad-valorem system. Second, the results from analyzing the price related differential (PRD), which is another means to test equity improvements by measuring inequities related to the extent to which higher valued properties have lower assessment ratios (and hence lower effective tax rates) than lower valued properties, suggest that the ad-valorem system would be more equitable than the area-based system. It is important to note that it is advantageous that the findings not only suggest equity shifts, but also suggest ones that are not so major that they would have a negative political repercussions.

The winners and losers under an ad-valorem system were found to be as expected. Those properties that were closer to the center of the city or had certain additional features -- such as sewers -- tended to be valued higher and thus found to have higher taxes under the ad-valorem system. In turn, those parcels that were farther from the center of the city, located in undesirable locations, or lacked certain amenities, tended to be valued lower and hence the "winners" in terms of the tax burden.

With regard to the impact on revenue generation for the city, the findings were also positive. With a weighted market value per square meter of (vacant) land at 132,000 zlotych and with a current tax rate of 2 zlotych per square meter (i.e., an effective rate of 0.0015%), the current revenues for Krakow (a city with 328,000,000 square meters), amount to 656,000,000. In contrast, under an ad-valorem system, a 1.5 percent tax rate would be conceivable, representing a 1,000 fold increase over current rates. While tax rate increases of this magnitude should not be done all at once, the potential for massive change, however, is obviously present.

The paper closes with a review of potential approaches that the city of Krakow and country of Poland might take and the issues they should consider in implementing an ad-valorem property tax system. It is hoped that this paper and its findings will affect the debate and the political will to introduce this change in the local tax structure, either nationally through legislative amendments or locally through public referendum.

THE ECONOMIC IMPACT OF AND STRATEGY FOR IMPLEMENTING AN AD-VALOREM PROPERTY TAX

A CASE STUDY OF KRAKOW

INTRODUCTION

The U.S. Agency for International Development (USAID), the International City/County Management Association (ICMA), and the Krakow Real Estate Institute (KREI) have been supporting the development of a prototype ad-valorem property tax in Poland since September 1992 under EUR-0034-00-C-2034-00. The ICMA/KREI team undertook the first stage of work in 1992-1993 to answer questions regarding market development, its measurability, the technical potential for mass valuation, and the institutional framework required. The study findings were positive, confirming that at least parts of the real estate market were rational, transparent, and amenable to modelling for mass valuation. The report presented these findings as well as a framework and prototype manual for implementing a property tax system in Poland.

The positive results of the first stage of the project formed the basis for the ICMA/KREI team to take the development of an ad-valorem property tax in Poland to its next logical stage: simulation of an ad-valorem property tax in the city of Krakow. The significance of this simulation was to provide sufficient information to the city of Krakow on what the expected economic impact would be on the city in the event that such a tax were implemented. The intention is to provide the city with the economic justification required to transition from an area-based to an ad-valorem based property tax.

The findings from this simulation, as presented below and detailed in the Annex, suggest that the economic impact of introducing an ad-valorem property tax would be favorable, both in terms of equity to the residents and greater revenue for the city. This paper presents these findings in the context of the current state of fiscal decentralization and application of the property tax in Poland as compared to its potential application under an ad-valorem system and to its application elsewhere in the world. In so doing, these findings offer support for the economic and equity arguments in favor of the transition to and implementation of an ad-valorem property tax in the city of Krakow. Finally, the paper closes with a review of potential approaches that the city of Krakow and country of Poland might take and the issues they should consider in implementing an ad-valorem property tax system. It is hoped that this paper and its findings will affect the debate and the political will to introduce this change in the local tax structure, either nationally through legislative amendments or locally through public referendum. It should be noted that the final results, which will be presented at a September 1994 conference in Krakow, will reveal the full impact of introducing a market value-based property tax in Krakow and thereby assist in furthering the debate and generating support for the conversion to an ad-valorem system.

BACKGROUND

Decentralization & Local Self-Sufficiency: A Financial Challenge for Municipalities

Local governments in Poland face a challenge similar to those in other emerging market economies where the transition from centralized to decentralized government demands that they assume new responsibilities for service and infrastructure provision even though they may not yet have the resources or capacity to do so effectively. The fundamental reason is that decentralization is a very complex process in which the multiplicity of legal, institutional, and financial reforms necessary for effective decentralization do not occur quickly or simultaneously. The result is generally an incongruence between the increase in local authority and responsibility, on the one hand, and the ability and capacity for local revenue generation and finance, on the other. Accordingly, while local governments in Poland may be eager to assume their new responsibilities, they are recipients of un- or under-funded mandates that are often not accompanied by the necessary institutional infrastructure at the local level to implement them. For this reason, local governments in Poland as elsewhere face serious challenges in financing their recurring operating expenses, not to mention large-scale, long-term infrastructure investments. By looking at the current experience of Krakow compared to a simulation of what could be possible, this paper proposes what is probably one of the most important steps that local governments in Poland could take to overcome this challenge: conversion to an ad-valorem property tax.

Revenue Generation in Poland: The Current Situation

Krakow's particular situation is representative of local governments throughout the country, as a result of a common national fiscal context, in which the process of fiscal decentralization is just beginning. As a general rule, the current state of local finance in Poland differs significantly from western cost accounting or capital markets standards. Budgeting systems in Poland are still based on old accounting procedures and have little relationship to economic and financial planning, although improvements are beginning to be made in this area, for which Krakow's recently approved budget is a case in point. Revenue sources are much too dependent on central government decisions and funding. General transfers, dedicated transfers, and revenue sharing are still the major revenue source for financing of municipal services, comprising 53 percent of total gmina revenues in 1992. While gminas do have control of approximately 42 percent of their total revenues, the autonomous sources of local budgetary revenue that exist are far too small, not fully controlled and are sometimes kept "off budget" by municipalities so as to avoid a reduction in the amount transfers they receive from central government. Even with the local autonomous sources of income that are authorized, the central government often caps them—as in the case of the property and transport vehicle registration taxes—or imposes exemptions that often significantly reduce the potential for local revenue generation. Finally, the lack of a market base even further limits the revenue generation potential of some of these taxes, as in the case of the property tax, which is based on land area, not property value. These financial realities and constraints faced by local governments in Poland underscore the need to address national policies affecting local government finance as well as reform mechanisms such that they will improve municipal revenue generation at the local level.

The Property Tax as a Local Government Revenue Source for Krakow

While there are many key issues related to local government finance reform in Poland, this paper focuses on one aspect of the local revenue generation system that offers one of the most significant opportunities for improving municipal revenue generation capacity: the local property tax.

The primary reason is that the property tax is the most widely used form of raising revenue for local governments throughout the world. This results largely from the inability of real property to shift location in response to the imposition of a tax, the potential for a more direct connection between the tax imposed and services provided locally, and the comparative simplicity of property tax administration. These factors have contributed to the property tax representing an important source of autonomous local government revenue. Virtually all local governments depend to some extent on the property tax while several local governments depend almost exclusively on it (including Canada, the U.S., and Australia).

The second reason is that the introduction of an ad-valorem property tax will be facilitated by the fact that this tax already exists as a local autonomous revenue source in Poland, unlike many other countries in Central and Eastern Europe. This means that the property tax is under municipal domain, and therefore local governments in Poland already have the power—through the law on local taxes and fees—to reform the local property tax by way of public referendum. As a result, they do not have to wait for reform at the national level before reform takes place at the local level even though simultaneous and coordinated efforts at the national level would undoubtedly facilitate the process locally.

Third, the property or “real estate” tax has already proven itself to be the most important “self-controlled” fiscal source for all gminas, supporting 17 percent of gmina budget revenues (Greytak 1994), as **Table I** presents below. The significance of the property tax can also be illustrated by its share of all local autonomous revenues. Given that gminas have direct control in the determination of about 42 percent of their total revenues (Greytak 1994), the property tax represents 40 percent of all locally controlled revenues.

Fourth, Poland's property tax holds even more potential as a revenue source, particularly if it were converted to an ad-valorem system. Comparisons with other countries throughout the world demonstrate the potential of the property tax as a revenue source. For example, as **Table II** illustrates, the property tax as a percentage of all local tax revenues constitutes as much as 95 percent in the Netherlands and 81 percent in Canada, compared with 42 percent in Poland. As a percentage of all local revenues, the property tax in Poland (currently at 17 percent) also holds more potential, as compared to 24 to 30 percent in France, the U.S., and Canada. While the average in the U.S. is at 26 percent, the actual range is broad, between 10 and 70 percent throughout the U.S. (IAAO 1992). Although data in developing countries is scarce, the World Bank indicates that property taxation in developing countries is also important for 40-80 percent of local government finance (Dillinger 1991).

TABLE I: STRUCTURE OF GMINA REVENUES IN 1992			
	Revenue Type	1992 billion PLZ	1992 % of total
1	Property Tax	10,536.6	16.36%
2	Agricultural Tax	1,737.1	2.70%
3	Shared Taxes	14,279.8	22.17%
	Corporate Income Tax	1,665.5	2.59%
	Personal Income Tax	12,614.3	19.59%
4	Stamp Duty	3,391.5	5.27%
5	Other Revenues	14,802.9	22.99%
6	Transfers from State Budget	12,092.9	18.78%
	Own Projects	1,625.3	2.52%
	Commissioned Tasks	10,467.6	16.25%
7	General Subsidy	7,560.9	11.74%
	TOTAL	64,401.7	100.00%
<i>Source: GUS, Information on budget performance of municipalities in 1991-99 (in Greytak 1994).</i>			

This greater revenue generation potential is significant in light of the fact that gminas require new and improved revenue sources to finance local government, given that their capacity to save is declining (from 32 percent in 1991 to 20 percent in 1993) and their financial margins are diminishing. At the same time, the land asset base of municipalities is gradually decreasing with the strengthening of the restitution process through which municipal assets are being returned to private citizens. In addition, revenues coming from the central government can be unpredictable given the changing economic climate and may decrease as the decentralization process progresses. Instead of continuing to rely on this diminishing asset income and the uncertain future of central government transfers and subsidies, municipalities will need to look towards increasing reliance on tax income. Ultimately, gminas will not be able to survive financially under the current structure and will need to turn to other sources of revenue. It is the property tax that offers the greatest potential in the short term as an alternative source.

TABLE II: COMPARISONS OF PROPERTY TAX REVENUE IN SELECTED COUNTRIES				
Country	Property Tax as a Percentage of:			
	Local Tax Revenues	All Local Revenues	Government Revenues	GDP
Poland	40.0	17.0	--	--
The Netherlands*	95.0	4.2	2.2	N/A
Canada*	81.0	30.2	6.9	2.84
USA*	75.3	26.4	14.6	2.96
		average 10 - 70 range		
France (1992)*	52.0	24.1	8.6	2.2
*Source: "An International Survey of Taxes on Land and Buildings," John Youngman, Jane Malme, 1994.				

Fifth, gminas are under increasing pressure to invest in infrastructure and require long-term credit and other revenue sources to finance these investments. In order to obtain that credit, they will need a more stable revenue base which can in part be made possible through an ad-valorem property tax. This is especially true in large cities that are gradually taking over more of these responsibilities by participating in the so called Pilot Program for successive devolution of central government powers to the local level. While assuming more responsibilities for delivery and funding of services, local governments are increasingly under pressure to respond to the lack of housing and transportation, deteriorating streets, unsanitary conditions, poor water and air, and declining schools and health services. Local governments that need to make necessary investments in infrastructure cannot count on receiving central government transfers or guarantees to finance these investments.

They have to look for their own ways to obtain funds through loans, bonds, and public/private partnerships. This in turn requires that local governments become "rateable" partners for capital markets. One of the major impediments to obtaining rating is the weakness of local government financing capacity, stemming from the improper structure of local taxes, which in Poland are mostly based on per-area capped-rate property taxes. Local government financing capacity is also weakened when a major portion of local budget revenues is being generated by central government transfers and subsidies rather local autonomous revenue sources. Thus, the improper structure of the local budget revenues and the absence of property collateral for infrastructure lending mean that the lender's interest must be secured with municipal revenues.

Finally, the transition to a market economy is already underway, meaning that sales and other relevant data are being made available to form the basis for an ad-valorem based property tax, which offers certain advantages over an area-based property tax as described below in the section on “Local Government Finance: A New Paradigm for the Property Tax.” When the system was being overhauled at the beginning of 1990, the Ministry of Finance considered the conversion to ad-valorem tax base but concluded that real estate markets were not sufficiently developed. Reforms of the tax system first focused on individual and business income taxes, then on value added and excise taxes, and only presently has there been a major interest in reforming local property taxes. The continuous development of real estate market activity, as well as the constant improvement of cadastral data, led to a point in 1993 when mass valuation—the foundation to an ad-valorem property tax—appeared feasible. This paved the road for further investigation from both a technical and economic standpoint into the impact and viability of an ad-valorem property tax.

To further support this process, the Krakow Real Estate Institute (KREI) under funding from USAID and in collaboration with ICMA, conducted research in 1992-93 to determine whether the real estate market in Poland had become sufficiently rational, readable and amenable for economic modelling, all of which are necessary conditions for establishment of assessment values based on market prices. The study findings were affirmative, confirming that at least parts of the real estate market were rational, transparent, and amenable to modelling for mass valuation.

Although the results showed that the market systems had matured enough to use market information as a good indication of the underlying value of the property, the results can also provide at least a confirmation of the relative scarcity value of land. This allows market and other information to be used to provide indicative value to property based on relative location.

This form of ad-valorem system, although somewhat crude, was the basis for ICMA and KREI to further develop a land valuation model and simulate an ad-valorem property tax in Krakow under additional funding from USAID in the Spring of 1994. The findings from this simulation, as further described below, indicate that the economic impact of introducing an ad-valorem property tax would be favorable, both in terms of equity to the residents and greater revenue for the city. On the basis of the results and on the usefulness of the data collected for the model simulation, the system developed under this project can be further refined over time as the market improves and can be expanded to improve the accuracy of the system.

LOCAL GOVERNMENT FINANCE: A NEW PARADIGM FOR THE PROPERTY TAX

The current state of local finance in Poland, on the one hand, and the need for viable alternatives, on the other, demand that local governments in Poland consider a new paradigm for self-finance. One of the first steps in developing a new paradigm for local government finance in Poland is to understand the fundamental flaws or disadvantages in the current approach to the property tax as well as the advantages in converting to an ad-valorem system.

Disadvantages of the Current Land Area-Based System

The disadvantages of the current property tax system in Poland relate to the tax being based on land area and not land and building market value. This type of system presents several disadvantages for not only the local government but also the citizens and local economy. These disadvantages are that a land area-based property tax system:

- is regressive and unequal
- is a limited revenue source
- distorts land markets

Regressive and Unequal

The most significant disadvantage of the current property tax system in Poland is that it is regressive with respect to property value. The tax rate in Poland remains constant independent of land value. This means, for example, that residents who own undesirable land must pay at the same effective rate as residents who own highly desirable land in a prime location with access to all services and amenities. This system is unequal in that it effectively requires residents with unequalled valued assets to pay the same tax per square meter. Ownership or use of land is an indicator of one's wealth. Since residents with less valuable land are likely to be in a lower-income bracket than those with desirable land, this would have an additional negative effect of requiring them to contribute a greater share of their income per square meter of land owned.

Limited Revenue Source

While the property or “real estate” tax is the most important *autonomous* source for all gminas, as noted above, it is a limited one in that the inequity of the area-based system will limit—through political resistance—the extent to which tax rates can be raised. It is possible that the unit rates under the existing system could be differentiated by “relative value” and have the same “value” and “equity” effect on taxpayers as an ad-valorem property tax. However, the maximum rate currently authorized by law is very low already, meaning that local governments would probably be reluctant to *lower* the property tax rate any further when they are needing to raise revenues. Therefore, it can be argued that the current system is a limited revenue source primarily as a result of its inequity and secondarily as a result of its present maximum.

Distorts Land Markets

The property tax rate also distorts land markets in that it does not account for the differences in value due to property location. In effect, it does not put a “scarcity” value on the individual parcel. For example, an individual who owns 10 square meters of land in a less desirable area that has no access to public transportation or services must pay exactly the same amount as an individual who owns 10 square meters of land in the center of a large city with excellent access to all forms of public transportation and services. By applying the same rate to all types of land and not taking into account any value in that land such as services, amenities, or location, the government treats all land the same, thereby discouraging the most productive and efficient use of land. As a result, land that typically

commands high market value due to its prime location (e.g., in the center of a city), will not be recognized as such and may be left to an inefficient use (such as a large industry).

Advantages of the Proposed Ad-Valorem Property Tax System

Local governments in Poland are in a unique position, as highlighted above, to embark on property tax reform. In addition, their strengthening the role of a local property tax by converting it into an ad-valorem basis is also one of the best ways for them to improve local revenue because the tax is almost impossible to avoid given that the tax base (property) is visible and—at least with regard to land and buildings—immovable. In contrast, income and transaction-based taxes can be difficult to administer, especially where underground economies are strong or in transition economies where economic activity can be easily hidden. The property tax is also a source of revenue that is not competitive with taxes used by higher levels of government. Below is a summary of other key advantages, some of which were substantiated by the results from the simulation of an ad-valorem property tax conducted in the city of Krakow. In general, the benefits are that an ad-valorem property tax can:

- Distribute the tax burden more equitably and thereby improve social equity;
- Improve municipal revenue generation and the capacity for local self-government;
- Improve local ability to achieve credit rating and access to capital markets;
- Improve fiscal efficiency and transparency;
- Stimulate the conversion of under-developed land to its best use; and
- Stimulate more appropriate and intensive spatial development.

Distribute the tax burden more equitably and thereby improve social equity

Conversion to an ad-valorem property tax can reallocate the tax burden more equitably by making the system more progressive with respect to property value. By definition, an ad-valorem tax should tax equally valued property equally and differently valued property proportionately. The prime focus in the equity considerations are two standard measures used in the United States and elsewhere, as follow:

- **The coefficient of dispersion (COD)** - measures the average percentage inequity, from all causes, in the tax rate. The COD is the standard way of measuring the equity of the assessments by means of assessment-to-sales-price-ratio studies. The results from the Krakow simulation suggest that as the market for land continues to evolve in Krakow that the COD under an ad-valorem system will approach the international standard (IAAO) of 20 percent or less. The two land model specifications reported in the Annex had CODs of 22 and 19.5, respectively. These results were a significant improvement over the area based system which had a COD of 66 percent. **See Map A** for the spatial representation or contour map of the **Predicted Price to Actual Price**.
- **The “price related differential” (PRD)** - is another means to test equity improvements by measuring inequities related to market value. Specifically, it measures the extent to which higher valued properties have lower assessment ratios, and hence lower effective tax rates, than lower

valued properties. The results from the Krakow simulation were much better for the ad-valorem property tax model than for the area based tax system (1.05 compared to 1.50). This again was at or near international standards (IAAO) of between 0.9 and 1.3.

These results for the COD and PRD, while not conclusive and needing to be viewed within the context of an emerging and often unpredictable market economy for which data may not be fully representative, are still suggestive of equity improvements that are possible through the ad-valorem system.

Improve Municipal Revenue Generation and the Capacity for Local Self-government

As mentioned above, an ad-valorem property tax could, if properly administered, improve municipal revenue generation by producing a higher level of revenue, serve as a more independent revenue source, and create a more reliable source of income over the longer term than the income generated by land assets and central government transfers and subsidies. While the area-based system could replicate the effect of the ad-valorem system by differentiating by “relative value,” the inequity of the existing area-based system would most likely limit its revenue generation potential as compared to an ad-valorem property tax. The ad-valorem property tax system can reallocate the tax burden and thereby make tax rates increases more politically acceptable than under the area-based system and could, as a result, allow an increase to be imposed at a higher rate before citizens act against it. Even when the rate is fixed by law, however, it provides a source of increasing autonomous revenues as the economy grows.

(Insert Map A Here)

Results from the model developed for Krakow suggest that an ad-valorem based property tax could support 34-40 percent of the budget as compared to 24 percent under the area-based system in 1993. This higher level of income would provide more revenues to local governments in Poland, thereby enhancing their capacity for local self-government. Accordingly, it would enhance their ability to develop key infrastructure, provide services, convert existing industry, procure modern technology, and invest in human capital.

An ad-valorem property tax could also result in a more independent revenue source because it implies a tax system that is *not solely* determined by central government. Rather, it is also based on the *market* and, in a democracy, on the approval of local citizens for certain elements of the tax system. The latter issue is critical for an independent revenue source in that, by obtaining initial citizen support for the property tax system, a local government can legitimately administer a property tax system. It can also avoid or minimize future local opposition to property tax increases where the public understands the link between taxes imposed and services provided.

Because of the above reasons, an ad-valorem property tax can create a more stable source of income over the long term than, for example, asset-based income that is rapidly diminishing or inter-governmental transfers that may be cut back. It is also, as described below, a critical link to obtaining long-term credit financing.

Improve Local Ability to Achieve Credit Rating and Access to Capital Markets

The absence of property collateral for infrastructure lending among local governments in Poland means that the lender's interest must be secured with municipal revenues. Given the improper structure of local budget revenues in Poland, it is crucial that local revenue systems be reformed such that they become more independent, reliable, and viable—as a means to secure that lending. Conversion to an ad-valorem property tax is one important step in this process. Once a viable municipal revenue system is established, then revenue intercepts can become a means to perfect the security interest is the revenue stream(s) of the municipality or the municipal enterprise that has pledged these specified sources in order to obtain loans. This form of lending is known as “secured lending,” for which there exists in Western countries an entire market known as “asset-based securities.” Although this form of lending is more sophisticated than others, it is one of the most successful forms of lending to less creditworthy borrowers and those that are establishing their credit track records (Greytak 1994, Part II, pp. 14-15). As a result, an ad-valorem property tax can assist a local government in becoming creditworthy and obtaining long-term credit financing.

Improve Fiscal Transparency

The visibility of property—and property taxes—focuses attention on the overall quality of governance and promotes accountability. In addition, an ad-valorem property tax offers an opportunity to increase local government transparency if the process of determining the property tax system involves citizen participation or approval through public forum or referendum. While there may be a need for government at the local or national level to establish certain property tax guidelines for the purpose of ensuring the public good and protecting certain disadvantaged groups, it is essential that

government obtain public approval in order to maintain legitimacy by being responsive and accountable to the public. This approval can be gained before, during, and after implementation of the system (e.g., through the tax administration in general, the taxpayer service, and the appeals and objection process). In this context, the tax administration should provide taxpayers with the information they need to understand the property tax system, how their property was appraised, and how their appraisal compares to the appraisals of similar properties. Taxpayers must receive notice of assessments and be given the opportunity for simple, informal appeal procedures. A third way that an ad-valorem property tax can improve fiscal transparency is by linking the tax with the provision of services, in other words, by ensuring that the tax incidence roughly corresponds to the distribution of the benefits associated with the tax. While no tax can be linked perfectly to services, the property tax is more effective than other forms of local taxes in making this link and improving government transparency.

Stimulate the Conversion of Under-developed Land to Its Best Use and Stimulate More Appropriate and Intensive Spatial Development

Conversion to an ad-valorem property tax would necessarily impact the use of land as a result of the emphasis on market value and of basing taxes on that value. In a market economy where taxes are based on the market value of land (and buildings) and where land (and buildings) are not undervalued, people, businesses and even government will locate based on the benefits and costs of the land in a given location. Since values affect costs (both in terms of sale/rental prices and taxes), they force society to make more efficient choices and hence more efficient and productive use of land. For example, a large industry, such as a cement plant, might need to utilize large tracts of land at the same time that it would need to minimize costs. As a result, it would most likely seek to locate and rent or purchase land that was not highly valued and hence not as costly, such as in an area outside of a city. This process of selecting location on the basis of its relative costs and benefits would tend to affect the use of land and how efficiently it is used. While governments and its citizens must still guide land development and use for its optimal social, economic and environmental use, this market process does have a positive effect on land use efficiency.

FURTHER TRANSFORMATION: ECONOMIC IMPACT AND EQUITY ARGUMENTS

Conversion to an ad-valorem property tax system first necessitates that the economic impact of the new system be tested so that the city and its citizens can be aware of the new system's effect, should it be implemented. To demonstrate the economic impact of simulating an ad-valorem property tax model in the city of Krakow, the ICMA/KREI team developed a general land valuation model, based on the following factors:

- Sales prices of 525 vacant land sales
- Locational factors such as city “sub-markets” or “value zones” known to local real estate experts and KREI, distance from the center, and neighborhood quality
- Property characteristics such as land area, level of service (electricity, sewer, water), frontage and depth
- Major road and rail networks

On the basis of this model, which is detailed in the Annex, the ICMA/KREI team developed additional models to determine the tax incidence, equity impact on the population, and potential tax revenue generation for (or economic impact on) the city. The results of these models and their analysis follow.

Equity Arguments

Measuring the General Equity of Introducing an Ad-Valorem System

In the above section on “Local Government Finance: A New Paradigm for the Property Tax,” the overall equity impact was presented as an argument in favor of the conversion to an ad-valorem system. Of all the reasons for converting to an ad-valorem system, the reallocation of the tax burden or “equity arguments” are the most important. The COD and PRD results did indicate that *major* equity shifts were possible, suggesting that introducing an ad-valorem system would be beneficial in improving overall equity.

It should be noted that the results of the Krakow model are quite positive -- especially in light of the fact that they are being measured against U.S. performance standards promulgated by the IAAO. Some consider these standards to be inappropriate (too demanding) for an emerging market economy such as Krakow's, given that even some U.S. states and localities with reasonably active land markets and well administered state property tax systems show results that are worse than those from the Krakow model, when subjected to the same COD and PRD tests for vacant land -- the basis for the data sample in Krakow. Indeed, while the results for Krakow are impressive even by IAAO standards, the transitional nature of Krakow's market does demand some caution regarding these results, given that it is necessary to recognize that any survey data taken from such a changing and uneven market may in fact not be entirely representative. Nevertheless, having noted that caveat, the ICMA/KREI team still believe that the results are positive in that they were achieved at all and that they are suggestive of the equity benefits that are possible by conversion to an ad-valorem system.

It is important to further note that, even if the benefits are not this great in the event that the transitional nature of the market may have been difficult to fully capture with the data sample, to a certain extent it is advantageous *not* to have major shifts in equity at one time insofar as such major shifts can result in upheaval among the citizens. It can be politically and even economically more beneficial to have the shifts in equity occur incrementally. In this manner, residents can more readily adjust to the changing market and tax structure.

Other measures of equity are also possible. One such measure is the extent to which the spatial distribution of the tax burden after the base-revision correlates with the spatial distribution of alternative measures of ability to pay (such as automobile registrations, personal income, income tax collections, and personal wealth). The possibility for such analyses is currently being explored in Krakow.

Identifying Equity Shifts

For a revenue-neutral shift in the tax base, from one based on square meters to one based on market value, it is obvious that the winners will be those whose properties have a market-value per-square-meter less than the weighted average of all taxable square meters in the taxing jurisdiction. Similarly, those who will lose are those whose properties are worth more, on a price per square meter basis, than the average. From the data base used to construct the computer-assisted mass appraisal (CAMA) model that was used for demonstration purposes to predict the value of all property potentially in the tax base, the ICMA/KREI team estimated the weighted average market value per square meter. That value is 132,000 zlotych per square meter. While the definitive answer to the questions of identifying equity shifts cannot be provided until the entirety of the tax base has been estimated because the data in the simulation may have some distortion due to the transitional nature of the market, the results are still suggestive of favorable equity impacts. Of the parcels in the data base, 57.4 percent had lower values per square meter than the weighted average and so would be considered to benefit from the equity shift according to the above terms. Because not all parcels are of uniform size, it may also be interesting to note that 61.5 percent of the square meters of the CAMA database model had prices-per square meter less than the average and would therefore qualify their owners as winners under the above terms.

The structure of the database model reveals additional detail about equity shifts. In particular, the market price declines with distance from the city center. Therefore, other things being equal, parcels more distant from the city center will be winners from the tax base change relative to parcels closer to the center. Therefore, other things being equal, parcels more distant from the city center will be winners from the tax base change relative to parcels closer to the center. This basic trend was accelerated if a parcel was near one of the four other negative value influence centers, the most prominent of which is Nova Huta in the South. Parcels with sewer, water and telephone access will be more highly valued, and thus more highly taxed, relative to those without access, meaning that such parcels will be “losers” with respect to tax changes. Likewise, parcels in certain value zones and enclaves generally associated with increased property values due to road construction or other special amenities, will also have higher values and thus will be more highly taxed under the tax change scenario. Thus, the model supports the basic notions in public finance that property taxes should be related to the distribution of public services. Those who benefit more from public services should pay more in connection with the noted terms in the above model. **Map B, B-1 and B-2**, which all show different spatial representations of **Ratio of the New Tax Bill to the Old Tax Bill**, illustrate this impact in more detail. The dark line on the maps show the demarcation between winners and losers spatially. Areas above the line (or at >1) would experience an increased tax bill (roughly 43 percent) while areas below the line (<1 , which is roughly 57 percent) would experience decreased bills, assuming revenue neutrality.

Impact on the City's Revenues

The current effective tax rate, which is on the order of two (2) zlotych per square meter, is astonishingly low in comparison to the weighted average value per square meter of sold parcels, which is 132,000 zlotych. Thus the effective tax rate is 0.0015 percent (see **Table III**). Other countries have widely varying effective tax rates, as statistics from the OECD publications attest. However, the U.S., Canada,

Australia, and Japan, among others, routinely tax property at rates that are on the order of one to two percentage points. It should be noted that all the comparative rates discussed thus far have applied to total property value, not just the land portion. This indicates that, by including buildings in the valuation, Krakow could expand the current potential if the application an ad-valorem tax rate were expanded to include buildings, not just land. Alternatively, in the absence of comparable taxes on improvements, and in view of typical land to improvement ratios on the order of between 1:3 and 1:5 for residential property, tax rates as high as five percent may be conceivable. Even a 1.5 percent tax rate would represent a 1,000 fold increase over current rates. Obviously, tax rate increases of this magnitude should not be done all at once and should be based on a foundation that expands the data base and strengthens the results of the current model simulation for Krakow. The potential for massive change, however, is obviously present.

TABLE III: TAX RATE AND LEVY SCENARIOS				
System Type	Weighted Avg. Value Per Sq. Meter of Sold Parcels (zlotych)	Amount of Tax (zlotych)	Effective Tax Rate	Total Tax Revenue (billion zlotych)*
Area-Based	132000	2	0.0015%	0.656
Ad-Valorem	132,000	1,980	1.5000%	649.44
*Based on Krakow land area of 328,000,000 m ² .				

Cost of a New System

It is likely that significant investments will need to be made to create and support a market value basis for property taxation. In order to sensibly compare one-time costs with annually received benefits, either the costs will have to be annualized or the benefits capitalized. It will also be important to quantify the difference in simplicity and cost, focusing on marginal difference and not total costs. The KREI is currently working on both the identification of costs and the appropriate capitalization/annualization techniques.

In the cost identification area, stress should be given to the need to set up systems to routinely acquire and validate the necessary market information, particularly sales prices, but potentially also income information for rent-capitalization purposes. The human and data processing capital to analyze the data will also be significant. Finally, there is some question about the adequacy of the descriptive data on the population of unsold properties that constitutes the tax base. It appears that the data being used for estimating the potential impact of the change in tax base do not correspond in any exact way to the data that would normally be collected to administer a tax of the type described, especially if significant rates

of taxation were obtained, noting that the current rate of taxation may not even be sufficient to cover the current administration system costs. Therefore, any comparisons with the cost of the new system should, if possible, take this factor into account.

Other factors also make comparisons difficult. These include, first, that the base of the current tax, *inne grunty*, which is usually translated to mean “other land” (not buildings and not commercial), makes it difficult to compare when the object is residential land. In addition, there are some conflicting statistics that raise concerns for comparisons. For example, one set of statistics reports the division of the *inne grunty* tax base among the four districts of Krakow with a 50 percent discrepancy relative to the detailed tabulations from computerized tax rolls. The 2:1 difference between the districts of Krwodrza and Nowa Huta with respect to their apparent square meters, compared to their essentially identical tax billings (1.3 million złotych) suggest something amiss with regard to the tax rate. Further development of the cost analysis will as a result need to be performed.

The modelling process produced results, as illustrated above, that were satisfactory for the economic impact study defined in the project. To actually implement an ad-valorem property tax in Krakow, a more extensive modelling process is required. The modelling analysis done for this study was designed to provide an increased understanding of the potential equity and revenue gains of an ad-valorem property tax relative to the current area based tax.

The land market is evolving rapidly in Krakow but still contains significant variability, and unpredictability. For example, there are wide ranges in transaction price across all land use types and in all sections of the city. The same is true for area unit measures such as price per square meter. However, the statistical techniques employed, enabled the team to draw reliable conclusions, within the objectives of the study, based on the sample data. The determination of the actual ad-valorem models and subsequent market values would be developed within the framework of the entire strategy for implementing the tax, which is outlined below.

STRATEGY FOR IMPLEMENTING AN AD-VALOREM PROPERTY TAX

Once equipped with an understanding of the potential impact of conversion to an ad-valorem system—and once that transition is deemed positive in the opinion of the Poles—local governments along with the national government need to develop a strategy for implementing such a system. There is presently no one strategy that is uniquely appropriate to Poland's situation. However, there are several scenarios that would take the best advantage of current circumstances and be most productive in the pursuit of a new system. Below is a presentation of those potential scenarios and the issues that must be addressed regardless of the route taken.

Scenarios for Property Tax Reform

Scenario #1: Local Government Reform that Leads to National Reform

One scenario, which was the one envisioned at the start of the property tax simulation in Krakow given that the property tax was a lower priority for the national government at the time, is for a local government such as Krakow to take the lead in local property tax reform. While Polish local governments are not given the authority to modify the existing property tax regime, they do have the option through a local referendum to enact any new tax or charge with majority vote of the registered voters. Given that this local authority exists, the Krakow government could take the results of this simulation and generate public support for the ultimate approval and adoption of an ad-valorem property tax through public referendum. This scenario would necessitate the development and implementation of a prototype or pilot system for the conversion to be fully possible, given that Krakow does not possess all of the elements necessary for the property tax, such as complete cadastre maps or local valuation offices. This prototype would need to be closely coordinated with the voivoda, where the cadastre maps reside and where substantially more capacity for administering such a system exists. Once the prototype is implemented and a functioning system is in place, Krakow could fully convert to an ad-valorem system. If successful, Krakow could serve as a model for other cities and ultimately provide momentum for the conversion to an ad-valorem system on a nationwide basis.

Scenario #2: Local Government in Coordination with National Government Reform

A second scenario would parallel Scenario #1 except that the process of reform and development of a prototype system would be carried out in coordination with the central government as well. This scenario is probably more likely, now that the Ministries of Finance, Construction and Justice have taken significant interest in property tax reform. They are currently reviewing different types of ad-valorem property tax systems and legislation and are discussing how the legal, physical and fiscal cadastre-- which would play a key role in any new property system—would be handled. ICMA consultants Joe Eckert and Dennis Robinson, along with Jan Brzeski of the KREI, are currently providing substantial information to these Ministries as they consider property tax reform. Given this interest at the national level but also that the property reform process is incipient, it may be possible for Krakow to gain the voter approval needed and commence development of a prototype system but in close consultation with the national government as it too pursues its approach to property tax reform. It may even be possible that Krakow could be used by the national government as the nationwide prototype or pilot city for implementing an ad-valorem property tax.

Scenario #3: National Government Reform with Local Governments Involvement

Given ICMA's experience with events at the national level, it is also possible that the Central Government may decide to move quickly in developing and implementing an ad-valorem system on a nationwide basis. If it does, it will most likely be a system that is at least partly centrally controlled, given the state of decentralization in Poland. However, such a system might be appropriate, given that the country is the size of some large U.S. states, some of which—such as Maryland—have centrally controlled ad-valorem property tax systems themselves. Even more U.S. systems are administered by counties, which would be the equivalent of a voivoda—the level of government in Poland that currently possesses the most capacity for administering a local property tax system. If the central government

does elect to quickly develop a nationwide system, the level of central government control and the responsibilities among different levels of government for administering such as system are still open. In other words, the Polish government could opt to establish some broad policy and administrative guidelines while allowing the voivodas and gminas to assume the majority of the administrative responsibilities. It is also possible that the central government could prepare enabling legislation for local governments and allow for a locally approved tax rate (and even potentially a locally approved determination of value districts). If the Polish government desired to promote decentralization and democratization in the property tax reform process, it should seek to develop a system that is devolved to the local level and that involves citizen participation as much as possible. In such a scenario, Krakow could develop its system in close coordination with the national government but take a more reactive or collaborative approach to tax reform as opposed to a more proactive one under Scenarios #1 and #2, while still playing an important role as a pilot project.

Issues

Regardless of the approach taken at the national or local levels, several issues will need to be addressed in order to develop and implement an effective and efficient ad-valorem property tax system. These issues are described below.

Address Institutional Issues: Structure the System

As mentioned above, efforts are already underway at the national level to design a system for implementing an ad-valorem property tax. Specifically, the Ministry of Finance, the Ministry of Construction, and Justice are all currently involved in the debates surrounding the institutional issues related to implementing an ad-valorem property tax. The primary focus of these ministries is who should have ownership of and responsibility for the cadastre? The answer to this question affects and relates to all aspects of ad-valorem property tax administration, including what roles local government will ultimately play in the new system. ICMA consultant Dennis Robinson and KREI President Jan Brzeski met with the Ministry of Finance in May to discuss these very issues. They proposed that, first of all, the cadastre not be housed in one Ministry alone but rather jointly managed by all three relevant Ministries—Finance, Construction, and Justice—for their respective parts (the fiscal, physical, and legal cadastre) and coordinated through a linked system. Further, they proposed that the property tax system should be structured in a way to ensure that the public good is protected, maximize economies of scale, build on existing institutional capacities, and decentralize responsibilities as much as possible to the local level. The proposed system is as follows in **Table IV**:

TABLE IV: DIVISION OF INSTITUTIONAL RESPONSIBILITIES FOR PROPERTY TAX ADMINISTRATION IN POLAND				
Activity	Central Government	Voivodship Tax Chambers	Gmina	Third Party
Property Information		Primary	Secondary	Secondary
Property Valuation		Primary	N/A	N/A
Tax Assessment		N/A	Primary	N/A
Collection		N/A	Primary	Primary
Enforcement		Secondary	Primary	Secondary
Appeals		Primary	Primary	N/A
Policy	Primary			
<i>Source: Eckert & Kelly 1993.</i>				

While this table only presents a broad outline of how an ad-valorem property tax administrative system should be structured and implemented, it suggests answers to the questions:

How will the physical, fiscal, and legal cadastre be maintained?

Who will assess properties?

Who will collect and enforce the taxes?

What will be the role of the public in property tax design and approval?

Who will set the tax policy?

In addition to these questions, it will be necessary to address *when and how the reforms will be phased and implemented.*

Establish a Legal Framework and Policy/Administrative Guidelines

Regardless of whether reform occurs first at the local and/or national levels, legislation will need to be prepared that:

- Defines taxable property
- Establishes the tax rate
- Defines taxable value
- Provides for disclosure of property related to information such as sales prices and circumstances of sales including financing and rents

- Specifies exemptions
- Specifies liability for taxation
- Specifies appeal rights
- Specifies procedures for tax payments
- Specifies procedures for dealing with noncompliance

At a minimum, these issues must be resolved. To the extent possible, the **system should be kept simple** so as to minimize confusion, public opposition and appeals. One first step is to consolidate and simplify the three types of property tax related laws that currently exist as well as the 32 exemption laws. At the same time, however, it will be important not to implement the system so incrementally that it does not result in a large scale and coordinated effect. A **strategic approach** that addresses several key areas of policy and administration at once will be needed. In addition, it will be necessary to **mobilize political commitment and support**. This may mean that the current focus on valuation and GIS may need to be broadened. It also means that it will be important to keep the tax rate low at the beginning in order to facilitate support for a new system and minimize the adverse impacts it may have on the population. Finally, if the central government is going to control or administer a certain aspect of the system, the **national income from the property tax should be earmarked for tax administration** and not simply transferred into general revenues. The amount the national government earmarks for its administration should also be small enough so that it does not “make money” but rather just covers its costs of operation. The majority of the property tax (e.g., 95 percent) should go to local governments.

Educate the Public, Mobilize Citizen Support, and Encourage Community Participation

To the extent possible, every effort should be made to keep the public informed and to obtain voter approval through public referendum for critical elements of the new property tax systems such as the rate. This may require a media campaign using television, radio and newspaper. It will also necessitate city council meetings that are open to the public and/or special town meetings dedicated to the property tax issue. It may also be useful to survey citizens to gauge the public support for a particular action or decision.

Implementation Plan for the Property Tax System

A plan should be developed that includes the above and more specifically that: (1) outlines all the work that will be performed and why it is being performed; (2) estimates the quantity of work to be performed; (3) sets out a plan for quality assurance by for example, stating the assessment standards for well-analyzed, repetitive activities as well as audit procedures; (4) estimates the personnel and other resource requirements, such as equipment and furniture; (5) specifies how property will be identified, characterized, inventoried, processed, mapped and inspected; (6) describes how taxpayers will be identified; (7) specifies how sales data will be collected, processed and analyzed and how property will be valued; (8) describes how the different offices of the tax property administration system will interface; (9) addresses how exemptions will be handled, with specific focus on how eligibility

requirements will be met; (10) establishes a system for informing and interacting with the public as well as responding to public inquiries; (11) sets out how the actual oversight system for control and appeals will function; and (12) schedules the tasks and projects to be undertaken by each office forming part of the administration system. Such a plan could be developed to establish a prototype system, as noted below, and subsequently enhanced and expanded for a city-wide system once the prototype system is successful.

Implement a Prototype System

It is essential for a prototype system be implemented to test its effectiveness and reliability and, perhaps more importantly, help gauge and generate public support. It will also be useful, if successful, as a showcase for other local governments in Poland and the Central and Eastern European region. Given the prior inexistence of an ad-valorem property tax system, the institutional capabilities for administering various aspects of the system do not exist. Before the full-scale ad-valorem system is implemented at the national or local level, a prototype should be implemented to verify that it is fully functioning and to correct any deficiencies in the system that may exist.

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